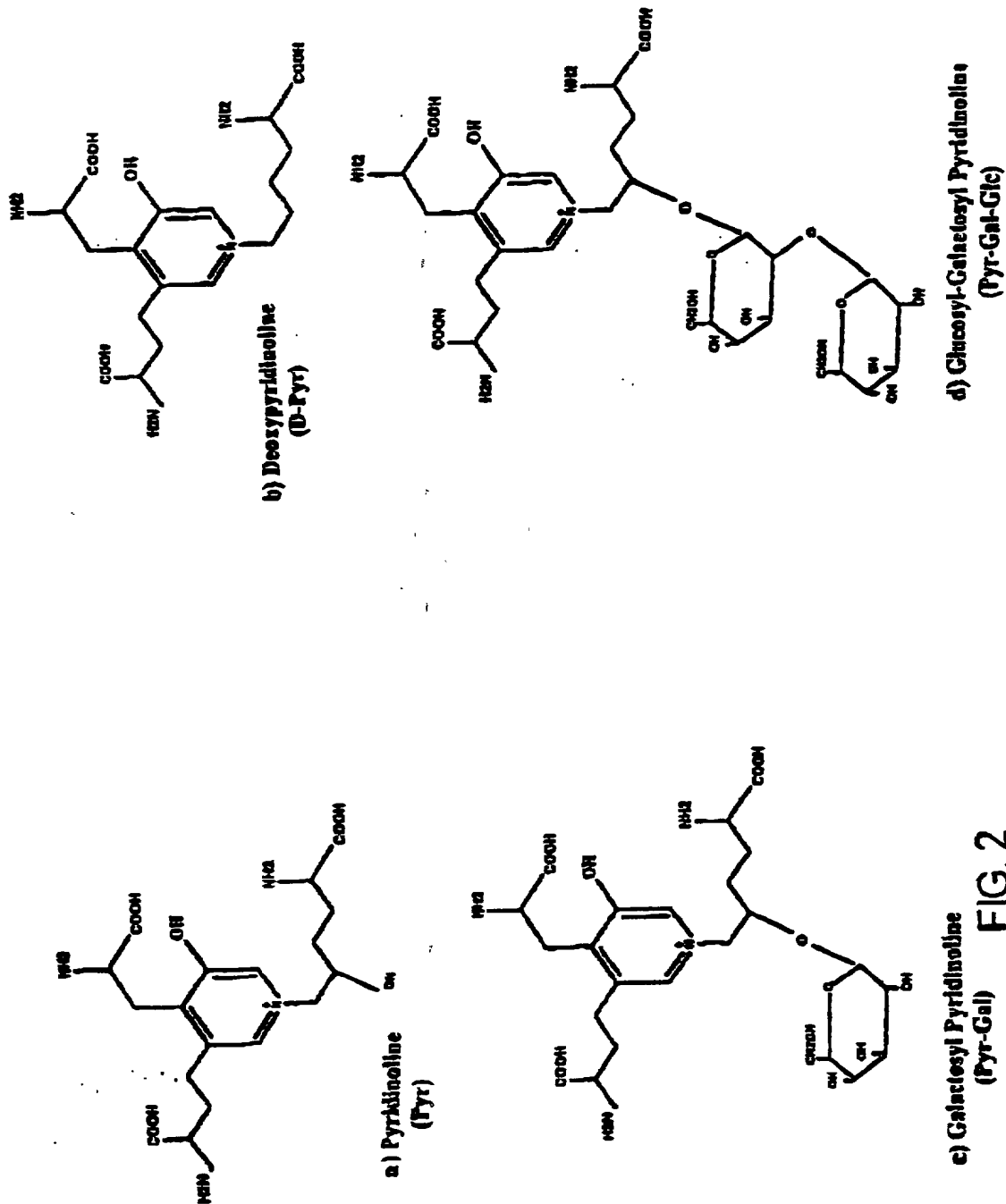


FIG. 1



c) Galactosyl Pyridinolone
(Pyr-Gal) FIG. 2

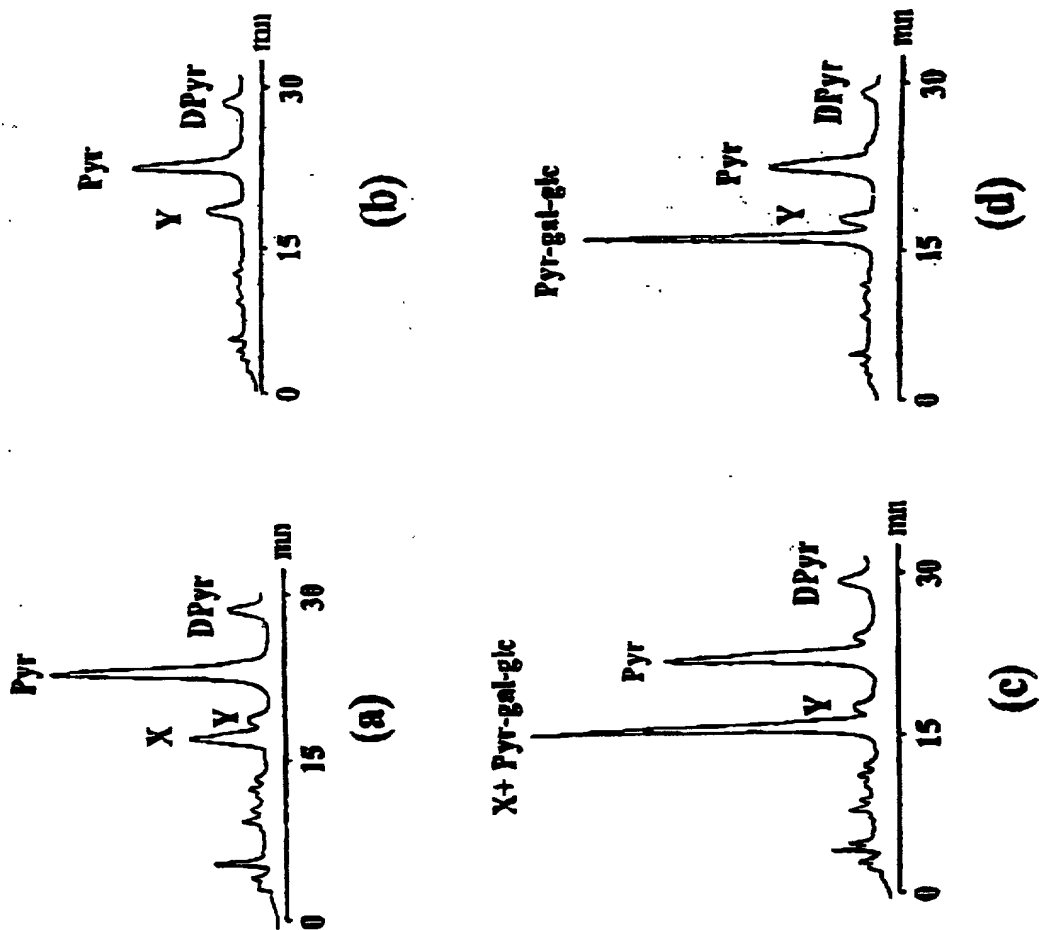
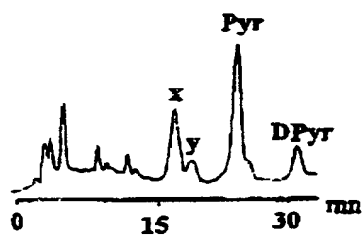
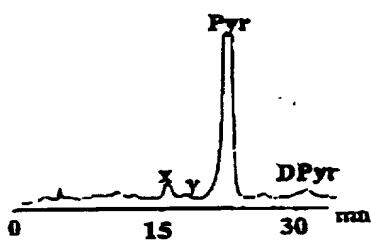


FIG. 3

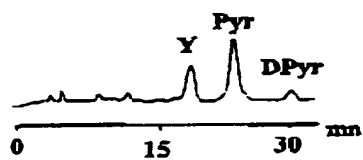
4/14



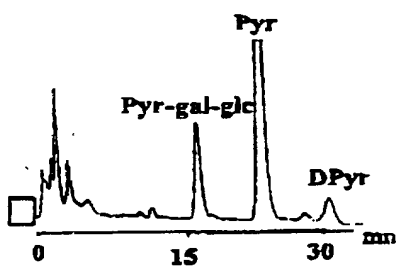
(a)



(b)



(c)



(d)

FIG. 4

FIG 5

Hydrolysis time	5 hours	10 hours	15 hours	20 hours
Tissue:				
Bone	1	-	-	-
	2	-	-	-
Synovial	1	105%	94%	54%
	2	72%	56%	64%
Cartilage	1	6%	2%	1%
	2	4%	2%	1%

FIG 6

Hydrolysis time		5 hours	10 hours	15 hours	20 hours
Tissue:					
Bone	1	56%	33%	28%	24%
	2	55%	44%	34%	29%
Synovial	1	16%	12%	12%	12%
	2	9%	10%	9%	9%
Cartilage	1	-	-	-	-
	2	-	-	-	-

7/14

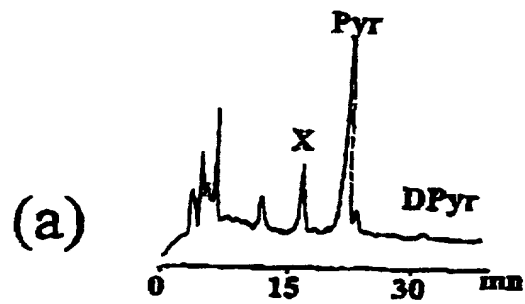
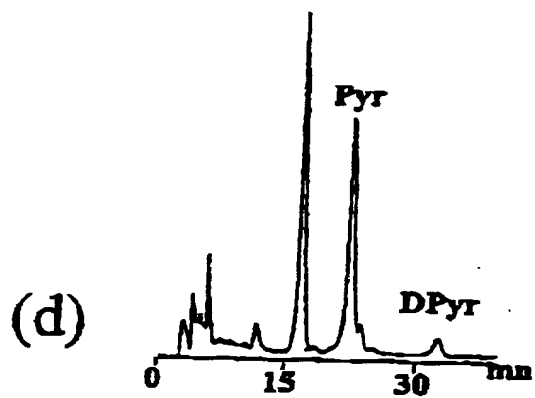


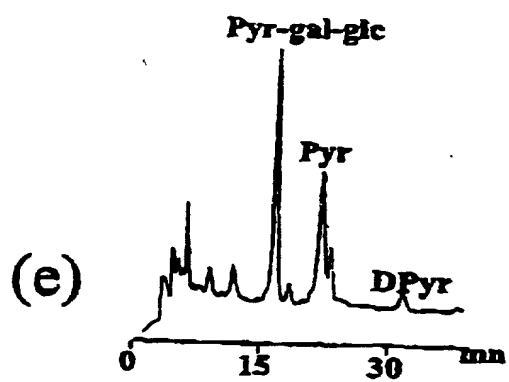
FIG. 7

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8/14
X+Pyr-gal-glc



Pyr-gal-glc



Pyr-gal-glc

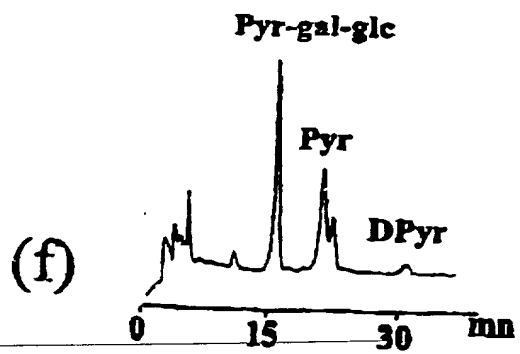


FIG. 7 Cont'd.

9/14

Subjects	n	Age	Total Pyr (nmole/nmole Cr)			Free Pyr (nmole/nmole Cr)				(nmole/nmole Cr)		
			Pyr	d-Pyr		Pyr	D-Pyr	Pyr-Gal-Glc		Cartilage	CrossLaps	
Pre-menopausal women	20	35.7 ± 2.8	28.5 ± 4.1	5.9 ± 1.4		13.4 ± 2.7	3.3 ± 0.9	4.5 ± 1.0		6.2 ± 0.9	126 ± 27	
Post-menopausal women	20	55.3 ± 2.4	34.8 ± 9.5	7.6 ± 2.6		15.6 ± 3.7	3.7 ± 0.9	4.8 ± 1.7		7.5 ± 2.8	231 ± 100	
Controls	40	45.5 ± 10.3	31.6 ± 7.9	6.7 ± 2.2		14.5 ± 3.4	3.5 ± 0.9	4.7 ± 1.4		6.9 ± 2.2	203 ± 106	
Rheumatoid arthritis	27	56.2 ± 11.9*	72.2 ± 51.8*	10.8 ± 7.6*		26.3 ± 15.0*	4.0 ± 2.3*	9.6 ± 5.9*		12.4 ± 8.5*	266 ± 187*	
Paget's disease	10		125.8 ± 53.6*	31.2 ± 13.5*		42.1 ± 15.4*	10.2 ± 5.1*	6.1 ± 1.9		7.2 ± 2.9	834 ± 352*	

* Statistical significance (Anova) $p < 0.05$ of the difference compared with control group.

FIG. 8

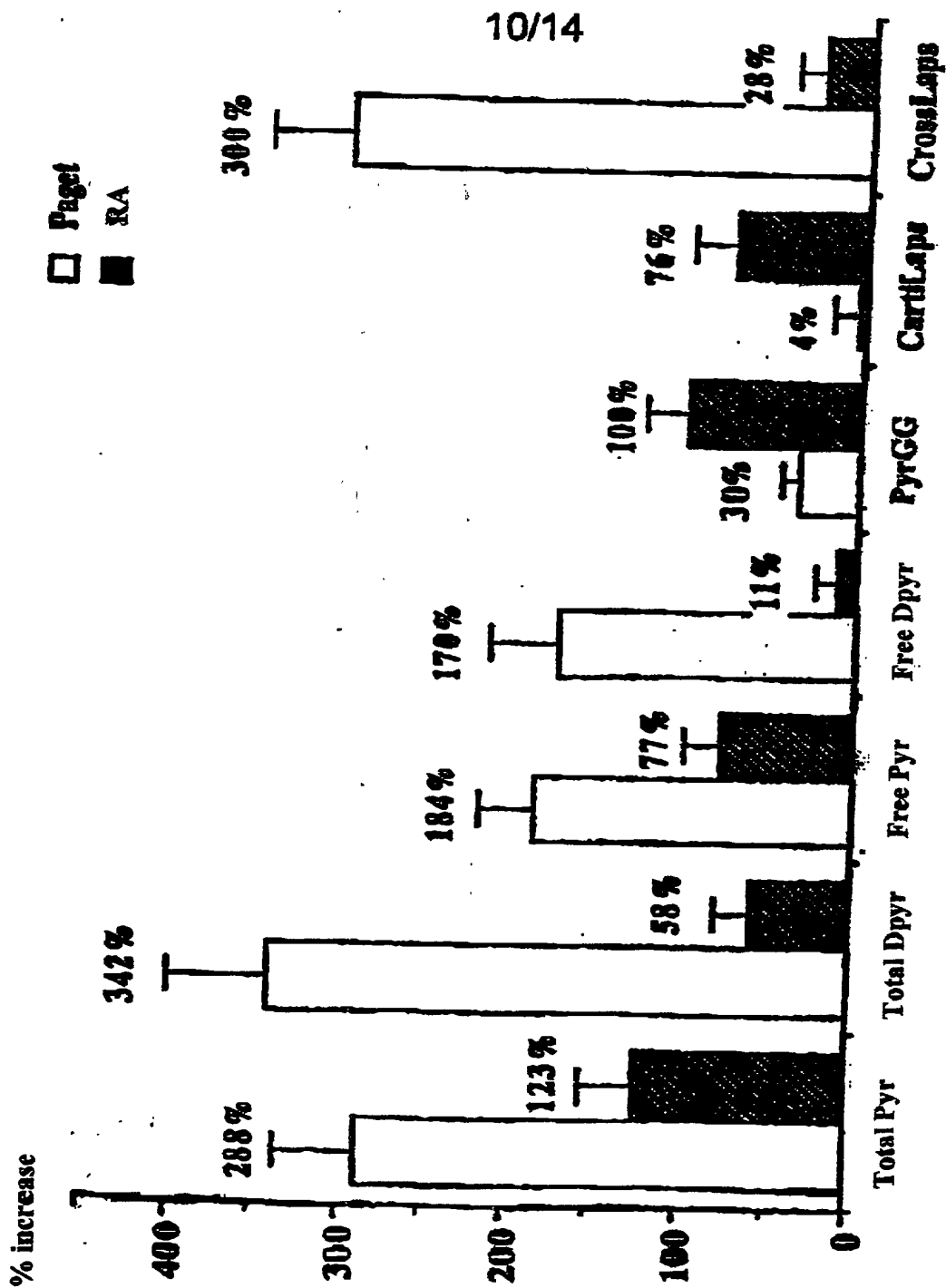


FIG. 9

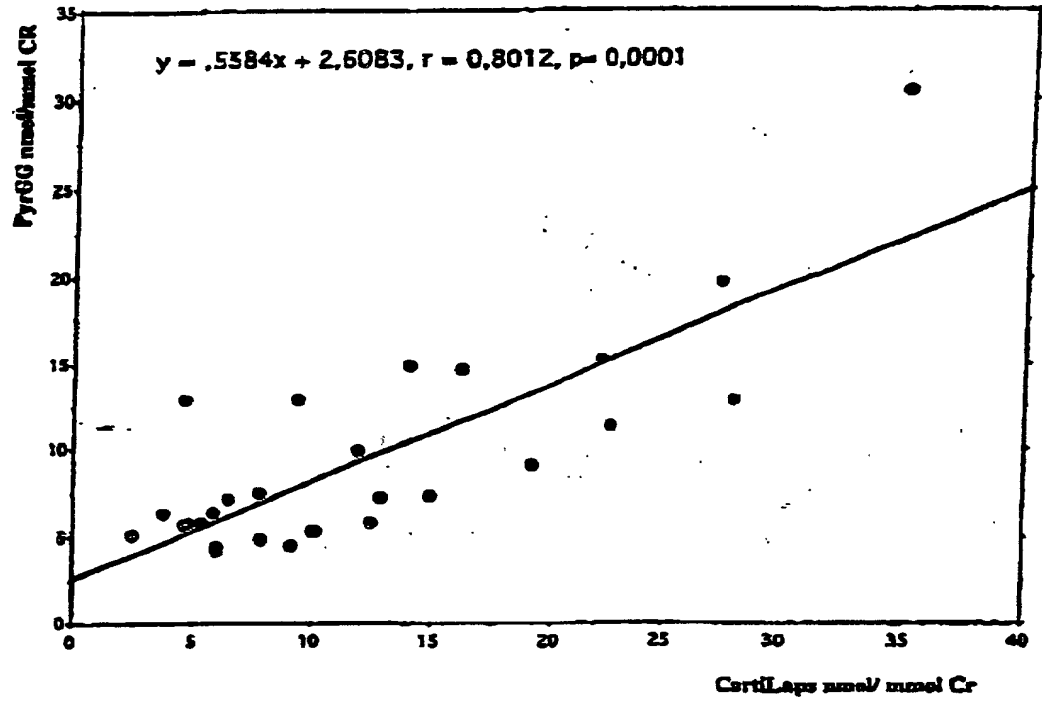


FIG. 10

FIG 11

	n	Pyr-Gal-Glc (nmole/m mole Cr)	CartiLaps (nmole/m mole Cr)
Controls	40	4.7 ± 1.4	6.9 ± 2.2
Rheumatoid arthritis (RA)	27	9.6 ± 5.9*	12.4 ± 8.5*
Destructive RA	12	12.2 ± 7.4*	16.5 ± 10.0*
Non destructive RA	15	7.5 ± 3.2*	9.2 ± 5.4**

* Statistical significance (T-test) p < 0.001

** Statistical significance (T-Test) p < 0.05

13/14

	Lequesne	Womac	Tibio-femoral space
Pyr-Gal-Glc	0.42*	0.50*	-0.50*
* p < 0.01			

FIG. 12

Progression	Narrowing of joint line		Bone erosion		Total score	
	YES (n=27)	NO (n=84)	YES (n=41)	NO (n=70)	YES (n=54)	NO (n=57)
Urinary Pyr-Gal-Glc (nmole/nmole creatinine)	8.8	7.2	9.3*	6.5	8.8**	6.3

Statistical significance of difference compared with group with no progress * p = 0.03; ** p = 0.05

FIG. 13